



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,095	12/17/2001	Angelo Vignotto	7587.183US01	2880

23552 7590 08/24/2005

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

KYLE, MICHAEL J

ART UNIT PAPER NUMBER

3677

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,095

Applicant(s)

VIGNOTTO ET AL.

Examiner

Michael J. Kyle

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over EPO 0748968 B1 ("EPO '968") in view of Vignotto (U.S. Patent No. 5,090,236). With respect to claims 1 and 5, EPO '968 discloses a sealing device for a rolling contact bearing comprising two races (3, 4) coaxial to each other, two inserts (7, 8) made of metal material and coupled to a relative race, a sealing lip (25) extending between the two inserts, and a sensor (48) supported by a more external of the two inserts (7). The more external of the two inserts (7) comprises an annular housing (45, 46) for supporting and at least partially containing the sensor. The annular housing is axially open towards an outside of the bearing and presents a shield (52). The annular housing (45, 46) includes two sidewalls (45, 46) at opposed edges of the sensor. The shield spans the sidewalls. EPO '968 fails to explicitly disclose the sensor to be a phonic wheel arrangement, and is silent as what material the shield is made of.
3. Vignotto teaches a speed sensing bearing assembly that includes a phonic wheel (13) and a shield (16). The shield (15) is made of rubber (column 2, lines 37-40). Vignotto uses the phonic wheel to determine the speed of a rotating element. Because the sensor of EPO '968 and the phonic wheel of Vignotto are used for the same reason, it is considered obvious that one having ordinary skill in the art would know to use either one, as no new or unexpected result is

Art Unit: 3677

produced from using one or the other. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify EPO '968, such that the sensor arrangement (48) is a phonic wheel arrangement, to determine the speed of rotating element. Likewise, it would have been obvious to one having ordinary skill in the art at the time of the invention to construct the shield of rubber as no new or unexpected result is brought about by such a modification.

4. With regard to the limitation requiring "vulcanized rubber", examiner notes that the term "vulcanized" refers to a manufacturing process, and is considered as a product-by-process limitation in an article claim. As long as the prior art product is capable of being made by the same process, then the prior art is considered to meet that limitation in the claim. Any rubber is capable of being vulcanized. Therefore, examiner asserts that Vignotto discloses a shield made of rubber that is capable of being vulcanized.

5. With respect to claim 2, EPO '968 discloses the housing to be radially delimited by a first (45) and second cylindrical wall (46) that form part of the more external insert. The first cylindrical wall defines an internal radial support for the phonic wheel (once the sensor is replaced with the phonic wheel taught by Vignotto) and the second wall defines an annular channel (50) with the other insert.

6. With respect to claim 3, EPO '968 discloses the second wall to present a cylindrical edge (near top of 45) that is folded toward the other insert and defines an outer radial limit for the shield (52).

Allowable Subject Matter

Art Unit: 3677

7. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Claim 6 is allowed.

Response to Arguments

9. Applicant's arguments filed June 14, 2005 have been fully considered but they are not persuasive.
10. Applicant argues the combination of EP '968 and Vignotto does not suggest how one of ordinary skill in the art could modify the structure of EP '968 to accept the C-shaped phonic wheel of Vignotto. Examiner respectfully disagrees. Examiner asserts that one having ordinary skill in the art would know how to replace one sensor with another. The sensor shown by EP '968 appears to be of rectangular cross section, and therefore includes at least a C-shape (formed by top and bottom walls, and one vertically extending sidewall, as shown in drawings). Because EP '968 accepts this rectangular shape, which includes at least a C-shape, it stands that EP '968 could accept a sensor that is C-shaped.
11. Applicant argues that replacing the sensor of EP '968 with the phonic wheel of Vignotto, would result in the chamber of EP '968 no longer being sealed by portion 53. Examiner respectfully disagrees. Replacing the sensor of EP '968 with the phonic wheel of Vignotto would not remove portion 53 of EP '968. The phonic wheel would take the place of the sensor. All other structure would remain unchanged.
12. Applicant argues if the combination of EP '968 and Vignotto were made, portion 53 of EP '968 would interfere with the function of the phonic wheel. Examiner respectfully disagrees.

Art Unit: 3677

Vignotto uses a thin wall at the radially outer portion of the phonic wheel, to avoid altering signals transmitted by the phonic wheel. Examiner asserts that the shield around the sensor of EP '968 can be considered to have a thin wall on the axially outer portion. One having ordinary skill would recognize that signals may be transmitted through this area. The combination of EP '968 and Vignotto meet all of the limitations set forth in the claims, as no equipment to receive signals from the phonic wheel is required by the claims.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

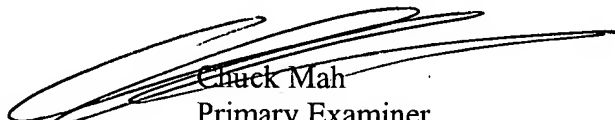
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Kyle whose telephone number is 571-272-7057. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

Art Unit: 3677

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mk



Chuck Mah
Primary Examiner
Technology Center 3600